

Name: _____

Period: _____ Date: _____

Physical Science

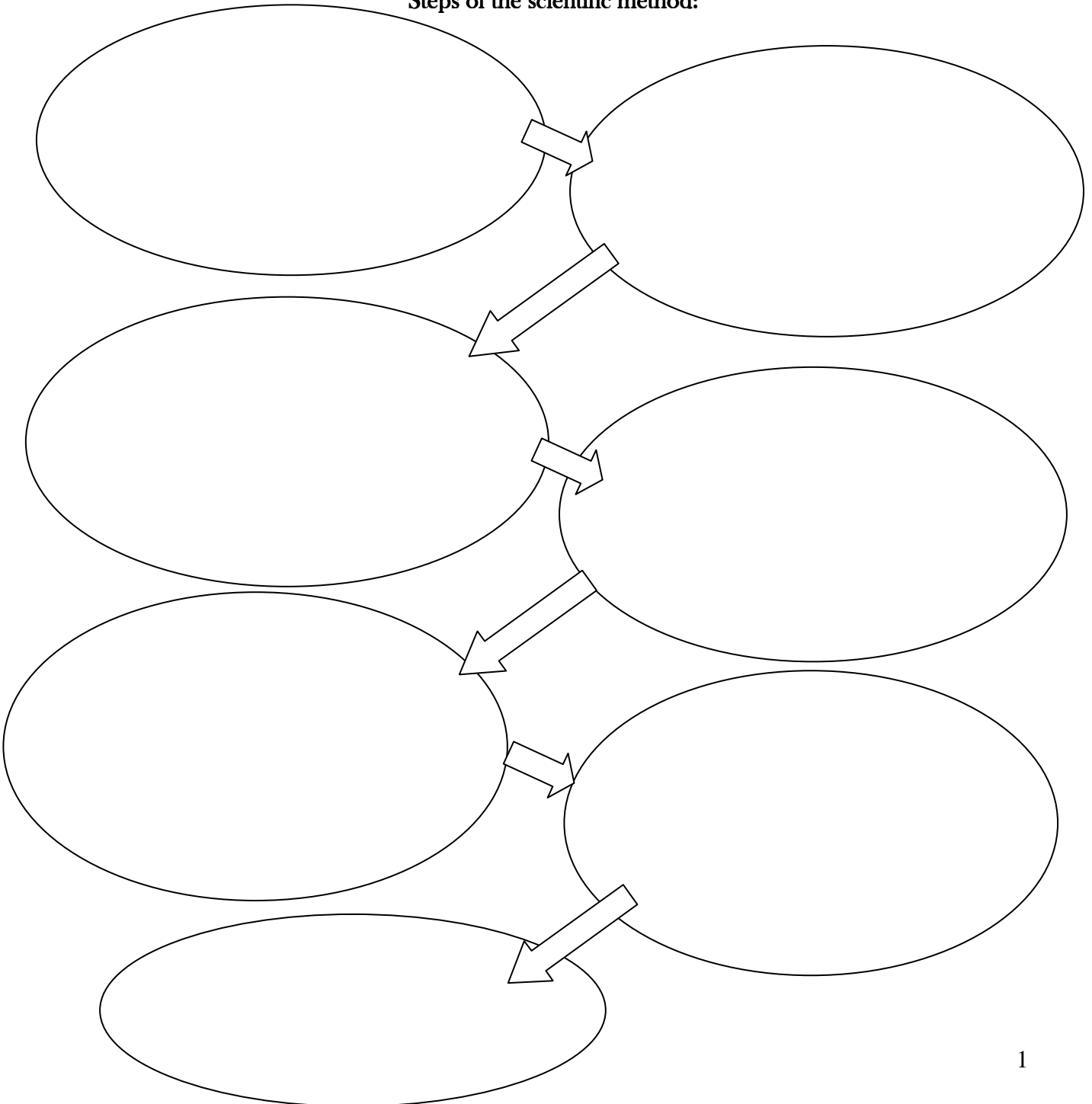
Ms. Johnson

The Scientific Method

In other words, the scientific method, means: _____

It uses

Steps of the scientific method:



SpongeBob and his Bikini Bottom pals have decided to do some research to solve their problems.
Directions: Read the description for each experiment below and answer the questions.

SpongeBob Clean Pants

SpongeBob noticed that his favorite pants were not as clean as they used to be. His friend Sandy told him that he should try using Clean-O detergent, a new brand of laundry soap, she found at Sail-Mart. SpongeBob made sure to wash one pair of pants in plain water and the other pair in water with Clean-O detergent. After washing each pair of pants a total of three times, the pants washed in Clean-O detergent appeared about as clean as those washed in regular water.

1. What was the hypothesis that SpongeBob was testing? (Write his hypothesis.)
2. What is the variable? _____
3. What are the controls? _____
4. What should SpongeBob's conclusion be?

Super Bubbles

Patrick and SpongeBob love to blow bubbles! Patrick found some Super Bubble Soap at Sail-Mart whose ad claims, "Super Bubbles makes bubbles TWICE as big as regular soap!" Patrick and SpongeBob made up two bubble solutions: one has 5 grams of Super Bubble in 2 liters of water, and the other has 5 grams of regular soap in 2 liters of water. SpongeBob used his favorite bubble wand to blow 10 different bubbles of each kind, and Patrick measured the diameter of each bubble before it popped. The results are shown in the chart.

(Diameter in centimeters)

Bubble	Super Bubble	Regular Soap
1	15	10
2	10	5
3	12	16
4	18	14
5	22	11
6	13	12
7	16	11
8	18	15
9	15	15
10	12	6

5. What did the Super Bubble ads claim?
6. What is the hypothesis that they are testing? (Write this as an "If/then" statement.)
7. What is/are the variable(s)? _____
8. What are the controls is the dependent variable? _____
9. Look at the results in the chart and calculate the average diameter for each bubble solution.

Super Bubble = _____ cm Regular soap = _____ cm
10. What should Patrick and SpongeBob conclude?
11. Are the results reliable? Why or why not?